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10/501,026	07/09/2004	Robert D. Coleman	7255-5	3624
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CHUI, MEI PING				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/501,026

**Applicant(s)**

COLEMAN, ROBERT D.

**Examiner**

MEI-PING CHUI

**Art Unit**

1616

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 July 2008 and 14 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 7-9, 13, 14 and 26-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-12 and 15-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 08/14/2008.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

***DETAILED ACTION***

***Status of Action***

(1) Receipt of Amendments/Remarks filed on 07/15 and 08/14/2008 are acknowledged. Claims 1-32 are currently pending in this application. Claims 1, 3-4, 6, 10-12, 15-16, 19, 23 and 24 have been amended; claims 2, 5, 17-18, 20-22 and 25 are originally presented and claims 7-9, 13-14 and 26-32 have been withdrawn.

(2) Receipt of Information Disclosure Statement filed on 08/14/2008 is acknowledged and has been considered by the Examiner.

***Status of Claims***

Accordingly, claims 1-6, 10-12 and 15-25 are presented for examination on the merits for patentability as they read upon the elected subject matter.

Rejections and/or objections not reiterated from the previous Office Action is/are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set of rejections and/or objections presently being applied to the instant application.

***Claim Rejection - 35 U.S.C. § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or

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in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**(1) Claims 1, 3-4, 15, 17-18, 20 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Tate, D. (WO 91/13552).**

The instant claims are directed to a fungicidal composition comprising (i) a fatty acid, i.e. oleic acid or palmitic acid, and (ii) an organic carboxylic acid, i.e. alanine, aspartic acid or glutamic acid, (iii) a carrier, and (iv) further comprising an adjuvant, an emulsifier or a diluent.

**With respect to claims 1, 3 and 18,** Tate, D. discloses a fungicidal composition for application to plants (page 1, line 1). Tate, D. discloses that the fungicidal composition comprises chemo-tactic ingredients that can be used to combat fungal and other myco-pathogenic infections in plants (page 1, lines 9 and 11-13). Tate, D. also discloses that the chemo-tactic ingredients are substances that produce a positive myco-chemotaxic response from the target fungi, wherein the chemo-tactic ingredients includes amino acids, i.e. glutamic acid, aspartic acid, or alanine, and fatty acids, i.e. oleic acid or palmitic acid added into water (page 2, lines 36-38; page 3, lines 1-3 and 18-25, and page 10, Examples 6 and 7). Therefore, instant claims 1, 3 and 18 are anticipated.

**With respect to claims 4 and 15,** Tate, D. discloses an amino acid alanine, which has a methyl side chain and a single carboxylic acid functionality contain in its structure. Therefore, the limitations recites in the instant claims 4 and 15 are anticipated.

**With respect to claim 17,** Tate, D. further discloses that the fungicidal formulation also comprises suitable diluents, carriers, or additives, which is usually

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present in a fungicidal composition (page 5, lines 31-37). Therefore, instant claim 17 is anticipated.

**With respect to claims 20 and 25**, Applicant recites the intended use of the composition in that the composition is suitable for application to harvested fruits, vegetables, berries, seeds, leaves, flowers and nuts. The intended use of the claimed composition does not patentably distinguish the composition, per se, since such undisclosed use is inherent in the reference composition. In order to be limiting, the intended use must create a structural difference between the claimed composition and the prior art composition. In the instant case, the intended use does not create a structural difference, thus the intended use is not limiting. Therefore, instant claims 20 and 25 are also anticipated by Tate, D.

**The previous rejection with respect to claims 1, 3-4, 15, 17-18, 20 and 25 under 35 U.S.C. 102(b) as being anticipated by Tate, D. (WO 91/13552), is maintained.**

***Response to Arguments***

Applicant's arguments filed on 07/15/2008 have been fully considered but they are not persuasive.

Applicant argues that "the prior art Tate lacks at least one element, the at least on emulsifier, required by Applicants claim 1 and each of the dependent claims. Tate's compositions do not include an emulsifier, nor are they necessary because he teaches that his formulations generally involve solutions. At page 6, last full paragraph, Tate

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discusses the problems avoided by only including soluble components” (see Remarks: page 1 and 2).

The arguments are not persuasive because, firstly, instant claim 1 recites the composition comprising (i) a fatty acid or a salt thereof, (ii) an organic carboxylic acid or a salt thereof, and (iii) a carrier, and therefore, “an emulsifier” that the Applicants rely upon for the arguments is not a claimed component required by claim 1. Secondly, the dependent claim 17 recites “the composition of claim 1 comprising one or more of an adjuvant, an emulsifier and/or a diluent”. The claim is drafted in such a way that either an adjuvant, or an emulsifier, or a diluent, is included in the instant invention; therefore, there is no requirement for the composition of claim 1 must include an emulsifier. In fact, the prior art Tate, D. discloses that the fungicidal formulation comprises a suitable diluent (page 5, lines 31-37).

**(2) Claims 1, 3-5, 15, 18, 20 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Shalom, B. D. (U. S. Patent No. 5,143,718).**

The instant claims are directed to a fungicidal composition comprising (i) a fatty acid, i.e. oleic acid, linoleic acid, undecenoic acid, octanoic acid, stearic acid or palmitic acid, and (ii) an organic carboxylic acid, i.e. benzoic acid, salicylic acid, ascorbic acid, formic acid, fumaric acid, cinnamic acid, glycine, alanine, valine, leucine, isoleucine, serine or threonine, (iii) a carrier, wherein the carrier is an alcohol.

With respect to claims 1, 3, and 18, Shalom, B. D. discloses a composition comprising one or more of organic acids and a carrier, wherein the organic acid is an aluminum salt of organic acid with antifungal property (column 2, lines 49-60). Shalom,

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B. D. discloses that the useful organic acids are benzoic acid, salicylic acid, ascorbic acid, fatty acids, i.e. oleic acid, linoleic acid, undecenoic acid, octanoic acid, palmitic acid or stearic acid, formic acid, fumaric acid, cinnamic acid, and naturally occurring amino acids, i.e. glycine, alanine, valine, leucine, isoleucine, serine or threonine (column 3, lines 1-13, and column 6, claims 1 and 4). Shalom, B. D. also discloses that the carrier of the composition is a liquid carrier, i.e. alcohol (column 4, line 3). In addition, Shalom, B. D. discloses that the fatty acids, i.e. undecenoic acid and octanoic acid, are known to have anti-fungal properties (column 3, lines 45-47). Therefore, instant claims 1, 3 and 18 are anticipated.

**With respect to claims 4 and 15,** Shalom, B. D. discloses that the composition can comprise amino acids, i.e. alanine or valine, in which alanine has a methyl side-chain and valine has an isopropyl side-chain, and carboxylic acid functionality contain in their structures. Therefore, the limitations recite in the instant claims 4 and 15 are anticipated.

**With respect to claim 5,** Shalom, B. D. also discloses that the composition can comprise fatty acid, i.e. octanoic acid, which is commonly known as caprylic acid. Therefore, instant claim 5 is anticipated by Shalom, B. D.

**With respect to claims 20 and 25,** Applicant recites the intended use of the composition in that the composition is suitable for application to harvested fruits, vegetables, berries, seeds, leaves, flowers and nuts. The intended use of the claimed composition does not patentably distinguish the prior art composition, per se, since such undisclosed use is inherent in the reference composition. In order to be limiting, the intended use must create a structural difference between the claimed composition and the prior art composition. In the instant case, the intended use of the instantly claimed

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composition does not create a structural difference that distinguishes it from the prior art composition, thus the intended use is not limiting. Therefore, instant claims 20 and 25 are also anticipated by Shalom, B. D.

**The previous rejection with respect to claims 1, 3-5, 15, 18, 20 and 25 under 35 U.S.C. 102(b) as being anticipated by Shalom, B. D. (U. S. Patent No. 5,143,718), is maintained.**

***Response to Arguments***

Applicant's arguments filed on 07/15/2008 have been fully considered but they are not persuasive.

Applicant argues that "the prior art Bar-Shalom does not teach any formulations having at least one emulsifier. Each of the claims rejected as being anticipated by Bar Shalom require at least on emulsifier" (see Remarks: page 2).

The arguments are not persuasive because, firstly, the instant claim 1 recites the composition comprising (i) a fatty acid or a salt thereof, (ii) an organic carboxylic acid or a salt thereof, and (iii) a carrier, and therefore, "an emulsifier" that the Applicants rely upon for the arguments is not a claimed component required by claim 1. Therefore, each the claim rejected, as set forth above, as being anticipated by Bar-Shalom does not necessary to require an emulsifier.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:



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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claim 1-6, 10-12 and 15-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sedun et al. (U. S. Patent No. 5,246,716) in view of Roberts, J. R. (U. S. Patent No. 5,741,502).**

***Applicant Claims***

Applicant claims a composition comprising (i) a fatty acid having 5-22 carbon atoms, i.e. octanoic acid or pelargonic acid, present in an amount of 1-99 % by volume, (ii) an organic carboxylic acid, i.e. glycolic acid, present in an amount of 0.01-80 % by volume, and (iii) a carrier, i.e. water or vegetable oil. Applicant also claims the composition comprising an emulsifier or a diluent.

***Determination of the scope and content of the prior art***

***(MPEP 2141.01)***

Sedun et al. teach an environmental safe and non-phytotoxic composition which is

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useful in protecting plants from fungal infection (column 1, lines 6-8).

Sedun et al. teach that the fungicidal composition comprises an effective amount of one active ingredient, or a mixture, from metal salts of mono-carboxylic fatty acids, which having 4 to 18 carbon atoms, and a liquid carrier (column 1, lines 55-58 and 62),

Sedun et al. also teach that the fatty acid metal salt active can be the sole active ingredient, or in combination with other active ingredients that can broaden the antifungal spectrum of the composition (column 1, lines 65-67 and column 2, line 1).

Sedun et al. also teach that the metal salts of the fatty acid can be calcium salts of octanoate, nonanoate, hexanoate or heptanoate, which is present in an amount from about 0.05-5 % by weight relative to the total weight of the composition. In addition, Sedun et al. teach that the effective amount of the active fatty acid salt will vary depending upon the identity of the fatty salt used, as some fatty acids are more fungicidally potent than others (column 2, lines 49-57 and column 12, claims 5-7).

Sedun et al. also teach that the composition comprises a carrier, i.e. water. However, other useful carriers, i.e. vegetable oils, light mineral oils, or cottonseed oil, can also be used to substitute water for the composition (column 3, lines 18, and 21-29). Furthermore, Sedun et al. teach that the composition can be in the form of a concentrated, or it can be further diluted with water prior to use (column 4, lines 1, 17, 39-41 and 55-59).

Sedun et al. teach that the fungicidal composition also comprises formulation enhancing agents, i.e. gums, dispersants or wetting agents (column 2, lines 3-9).

It is noted that octanoic and nonanoic acids are known in the art as caprylic acid and pelargonic acid, respectively.

**With respect to claims 2, 21 and 22**, Sedun et al. teach that the metal salt of the fatty acid, i.e. nonanoic acid, which is present in an amount from about 0.05 % to 5.0 % by weight relative to the total weight of the composition (column 2, lines 49-57 and column 12, claims 5-7). The % volume of the fatty acid, i.e. nonanoic acid, for example, presents in the composition can be calculated by converting the % weight of the nonanoic acid into the % volume using the density (0.9 g/ml) of nonanoic acid. For example, 0.05 % to 5 % by weight of nonanoic acid corresponds to 0.056 % to 5.56 % by volume of nonanoic acid in the composition.

*Ascertainment of the difference between the prior art and the claims  
(MPEP 2141.02)*

(1) However, Sedun et al. do not teach the fungicidal composition comprising an organic carboxylic acid, which is different than the fatty acid as claimed. However, this deficiency is cured by the teaching of Roberts, J. R.

Roberts, J. R. teaches an adjuvant composition which improves the chemical and physical properties of a fungicide (column 1, lines 1-20). Roberts, J. R. teaches that adjuvant(s) can be added to a composition to enhance biological activity of the pesticide or to reduce chemical instability and phytotoxicity (column 1, lines 22-41).

Roberts, J. R. also teaches that the adjuvant composition comprises buffering agent in an appropriated amount to maintain the pH of the composition within a desired pH range (column 2, lines 58-60 and column 3, lines 1-6).

Roberts, J. R. also teach that the suitable buffering agent includes glutaric acid, gluconic acid, glycolic acid, acrylic acid or C<sub>1</sub>-C<sub>6</sub> carboxylic acids, and the amount of the buffering agent can be present from about 0.5 % to about 10 % by weight in the

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formulation. However, the amount can be varied and preferably present in the amount in which the pH reduction could be accomplished by using no more than 0.5 % by volume of the final composition (column 6, lines 51-67 and column 7, lines 1-3). Roberts, J. R. further teaches that oil/emulsifier or water can also be added to the buffering agent to give a solution (column 9, lines 19-21).

**With respect to claims 4, 15 and 16**, Roberts, J. R. teaches that the buffering agent can be glycolic acid. It is known in the art that glycolic acid is a mono-carboxylic acid which has a straight alkyl chain substituted with a hydroxyl group.

**With respect to claims 10, 23 and 24**, Roberts, J. D. teaches that the buffering agent, i.e. glycolic acid, can be used in the adjuvant composition and is present in an amount about 0.5 % to 10 % by weight (column 6, lines 51-67 and column 7, lines 1-3). The % volume of the glycolic acid (organic carboxylic acid) present in the composition can be calculated by converting the % weight of the glycolic acid into the % volume using the density (1.27 g/ml) of glycolic acid. For example, 0.5 % to 10 % by weight of glycolic acid, as taught by Roberts, J. R., corresponds to 0.39 % to 7.87 % by volume of glycolic acid in the composition.

(2) **With respect to claims 11 and 12**, the combined teachings of Sedun et al. and Roberts, J. D. do not explicitly teach the weight ratio of fatty acid and organic carboxylic acid. However, the weight ratio between the fatty acid, i.e. nonanoic acid (pelargonic acid), and the organic carboxylic acid, i.e. glycolic acid, based on the amount taught above, falls within the ranges of 1:1000 to 1000:1, or 1:5 to 5:1, as instantly claimed. For example, the weight of the metal salts of nonanoic acid can be present in an amount of

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2.5% and the weight of the organic carboxylic acid can be present in an amount of 0.5 %, which corresponds to a weight ratio of 5:1.

***Finding of prima facie obviousness Rational and Motivation  
(MPEP 2142-2143)***

It would have been obvious to a person of ordinary skilled in the art at the time the invention was made to combine the teachings of Sedun et al. and Roberts, J. R. to arrive at the instant claimed invention.

One of ordinary skill also would have been motivated to utilize a salt of fatty acid in combination with an organic carboxylic acid, i.e. glycolic acid, because the organic carboxylic acid can act as an adjuvant and used in a fungicidal composition for adjusting the composition's pH, as taught by Roberts, J. R.

One of ordinary skill also would have been motivated to select a desirable fatty acid and organic carboxylic acid, and then adjust their amount to a desirable level, dependent on the selected combination of fatty acid and organic carboxylic acid by the manufacturer.

**With respect to claims 19, 20 and 25**, Applicant recites the intended use of the instant composition in that the composition is suitable for dilution and provides as a ready-to-use formulation for applications to fruits, vegetables, berries, seeds or nuts after harvesting. However, the intended use of the claimed composition does not patentably distinguish the prior art composition, per se, since such undisclosed use is intrinsic in the reference composition. In order to be limiting, the intended use must create a structural difference between the claimed composition and the prior art composition. In the instant

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case, the intended use of the instantly claimed composition does not create a structural difference that distinguishes it from the prior art composition, thus the intended use is not limiting.

From the teachings of the reference, one of ordinary skill in the art would have had a reasonable expectation of success to arrive at the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

**The previous rejection with respect to claim 1-6, 10-12 and 15-25 under 35 U.S.C. 103(a) as being unpatentable over Sedun et al. (U. S. Patent No. 5,246,716) in view of Roberts, J. R. (U. S. Patent No. 5,741,502), is maintained.**

### *Response to Arguments*

Applicant's arguments filed on 07/15/2008 and 08/14/2008 have been fully considered but they are not persuasive.

(1) Applicant argues that "one skilled in the art looking at a formulation containing a fatty acid or its salt would find no reason to add an additional carboxylic acid to buffer the solution. Carboxylic acids and their salts are generally stable in the presence of a base under the conditions most pesticides are applied. Even if a formulation containing a fatty acid were unstable, Roberts suggests that no buffer is needed for compositions having a pH of 7 or below. Although the office action states that one skilled in the art would add Robert's "carboxylic acid" to Sedum's "fatty acid formulation" to buffer the

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formulation, no reason has been provided as to why buffering is needed or why it might be desired. As a result, a prima facie case for obviousness based on Sedum in view of Roberts has been established” (see Remarks filed on 07/15/2008: page 8, part a and Amended Remarks filed on 08/14/2008).

The arguments are not persuasive because the prior art, namely Roberts, J. R., teaches when pesticides, i.e. fungicides, are used in combination with adjuvants, the chemical and physical properties of the pesticide (such as a fungicide) can be improved (see column 1, lines 14-19). Roberts, J. R., also teaches that adjuvants can be added to the agricultural chemical(s) to enhance the pesticidal performance, i.e. biological activity, by reducing application problems, i.e. chemical stability, incompatibility, solubility, evaporation, foaming, evaporation, suspension or coverage. They can enhance wetting, spreading, sticking, emulsifying, dispersing and biological activity, depending on the type of adjuvants (see column 1, lines 22-42). Roberts, J. R. suggests a buffering agent may not required if the surfactant comprised in the composition can provide the properties to reduce the pH to below about 7. Since the instant composition does not recite a surfactant is included; therefore, the presence of an adjuvant, such as a carboxylic acid, as a buffering agent in a composition that has fungicidal property would be beneficial and desirable, as suggested by Roberts, J. R.; and therefore, it would have been obvious for one of ordinary skill in the art to employ, as evidenced by the references, especially in the absence of evidence to the contrary.

(2) Applicant also argues that “the combination of a fatty acid and a different carboxylic acid defined in claim 1 provided unexpected superior fungicidal properties

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compared to a fatty acid alone or a carboxylic acid alone” (see Remarks filed on 07/15/2008: page 9, part b).

The arguments are not persuasive because the features upon which applicant relies (a synergistic effect) are not recited in the rejected claim 1. Although the claim is interpreted in light of the specification, limitations from the specification are not read into the claim(s).

This rejection is based on the well established proposition of patent law that no invention resides in combining old ingredients of known properties where the results obtained thereby are no more than the additive effect of the ingredients. Applicant invention is predicated on an unexpected result, which typically involves synergism, an unpredictable phenomenon, highly dependent upon specific proportions and/or amounts of particular ingredients. Any mixture of the components embraced by the claim(s) which does not exhibit an unexpected result (e.g., synergism) is therefore *ipso facto* unpatentable.

Since the instant claim 1 does not recite a range of proportions of the fatty acid and the organic carboxylic acid, where unexpected results are observed when combine; therefore, any proportion or concentration would have been obvious to one of ordinary skill having the above cited references before him.

### ***Conclusion***

No claims are allowed.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of



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time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### ***Contact Information***

Any inquiry concerning this communication from the Examiner should direct to Helen Mei-Ping Chui whose telephone number is 571-272-9078. The examiner can normally be reached on Monday-Thursday (7:30 am – 5:00 pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where the application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either PRIVATE PAIR or PUBLIC PAIR. Status information for unpublished applications is available through PRIVATE PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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Should you have questions on access to the PRIVATE PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/H. C./

Examiner, Art Unit 1616

/Johann R. Richter/

Supervisory Patent Examiner, Art Unit 1616